

## APPENDIX C

# SPECIAL STATUS PLANT AND WILDLIFE SPECIES

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### C.1 SPECIAL STATUS SPECIES LISTS FOR NEW MEXICO AND TEXAS

Special status species include Federally-listed (endangered or threatened), proposed, candidate, Federal species of concern, State listed and BLM-sensitive species.

#### Special Status Species (Federally-Listed, Proposed and Candidate Species):

##### **Mammals**

There are seven Federally-listed and candidate mammal species in New Mexico. Several of these species were extirpated from the State and have recovery programs in New Mexico or in the adjoining state of Arizona. As part of the recovery programs, populations are currently being reintroduced or there are plans to re-establish populations by natural migration or reintroductions in the future (in 10-20 years). Habitats on BLM-administered public land are currently or are expected to play an important role in these recovery programs.

Black-footed ferret (*Mustela nigripes*)

Jaguar (*Panthera onca*)

Lesser long-nosed bat (*Leptonycteris curasoae yerbabuenae*)

Mexican long-nosed bat (*Leptonycteris nivalis*)

Canada lynx (*Lynx Canadensis*)

Mexican gray wolf (*Canis lupus baileyi*)

Black-tailed prairie dog (*Cynomys ludovicianus*)

##### **Birds**

The Federally-listed, proposed, and candidate birds in New Mexico include three endangered, three threatened, and two candidate species. The list is dominated by five riparian-obligate species. These species have experienced a variety of threats, primarily habitat loss or fragmentation from urbanization, agricultural expansion, or damming of rivers (affecting native riparian habitats).

Northern aplomado falcon (*Falco femoralis septentrionalis*)

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Interior least tern (*Sterna antillarum*)

Bald eagle (*Haliaeetus leucocephalus*)

Mexican spotted owl (*Strix occidentalis lucida*)

Piping plover (*Charadrius melodus*)

Yellow-billed cuckoo (*Coccyzus americanus*)

Lesser prairie chicken (*Tympanuchus pallidicinctus*)

## **Fish**

The Federally-listed, proposed, and candidate fish species in New Mexico include six endangered, one proposed endangered, six threatened and one candidate species. Many of these species were formerly widespread in the river systems of New Mexico, but are now restricted to isolated or reduced populations on a fraction of their former range. Threats to these species typically include man-made changes to the river systems, such as habitat fragmentation, damming, dewatering for agriculture, mining, and urbanization; and competition or predation by introduced non-native fish species.

Gila topminnow (*Poeciliopsis occidentalis occidentalis*)

Rio Grande silvery minnow (*Hybognathus amarus*)

Razorback sucker (*Xyrauchen texanus*)

Pecos gambusia (*Gambusia nobilis*)

Gila trout (*Oncorhynchus gilae*)

Colorado pikeminnow (*Ptychocheilus lucius*)

Gila chub (*Gila intermedia*)

Beautiful shiner (*Cyprinella formosa*)

Loach minnow (*Tiaroga cobitis*)

Spikedace (*Meda fulgida*)

Pecos bluntnose shiner (*Notropis simus pecosensis*)

Arkansas River shiner (*Notropis girardi*)

Chihuahua chub (*Gila nigrescens*)

Zuni Blue-head sucker (*Catostomus discobolus yarrowi*)

## **Amphibians**

Two amphibian species are listed in New Mexico including one threatened frog and one candidate toad species. Threats to amphibians include predation by introduced bullfrogs and non-native fish, disease, habitat fragmentation or destruction, water manipulation, and water quality degradation. These species frequently have an increased probability of local extirpation because of their small, often isolated, populations.

Chiricahua leopard frog (*Rana chiricahuensis*)

Boreal western toad (*Bufo boreas boreas*)

## **Reptiles**

Two reptile species are listed in New Mexico, including one threatened snake and one candidate lizard species.

New Mexico ridge-nose rattlesnake (*Crotalus willardi obscurus*)

Sand dune lizard (*Sceloporus arenicolus*)

## Molluscs/Crustaceans and Other Invertebrates

The Federally-listed, proposed, and candidate invertebrates on BLM-administered public land in New Mexico total 12 species. These include three endangered, five proposed endangered and four candidate species.

Socorro isopod (*Thermosphaeroma thermophilum*)  
Alamosa tryonia springsnail (*Tryonia alamosae*)  
Socorro pyrg snail (*Pyrgulopsis neomexicana*)  
Koster's tryonia springsnail (*Tryonia kosteri*)  
Pecos assiminea snail (*Assiminea pecos*)  
Roswell pyrg snail (*Pyrgulopsis roswellensis*)  
Noel's amphipod (*Gammarus desperatus*)  
Sacramento Mountains checkerspot butterfly (*charidryas spp*)  
Gila pyrg snail (*Pyrgulopsis gilae*)  
New Mexico Hotspring pyrg snail (*Pyrgulopsis thermalis*)  
Chupadera pyrg snail (*Pyrgulopsis chupaderae*)  
Texas hornshell (*Popenaias popei*)

## Flowering Plants

The Federally-listed, proposed, and candidate plants on BLM-administered public land in New Mexico total 13 species. These include seven endangered and six threatened species.

Kuenzler's hedgehog cactus (*Echinocereus fendleri var. kuenzleri*)  
Sneed pincushion cactus (*Coryphantha sneedii var. sneedii*)  
Sacramento prickly poppy (*Argemone pleiacantha spp. pinnatisecta*)  
Todsens pennyroyal (*Hedeoma todsenii*)  
Knowlton cactus (*Pediocactus knowltonii*)  
Mancos milk-vetch (*Astragalus humillimus*)  
Holy Ghost ipomopsis (*Ipomopsis sancti-spiritus*)  
Pecos (puzzle) sunflower (*Helianthus paradoxus*)  
Zuni fleabane (*Erigeron rhizomatus*)  
Gypsum wild-buckwheat (*Eriogonum gypsophilum*)  
Lee pincushion cactus (*Coryphantha sneedii var. leei*)  
Sacramento Mountains thistle (*Cirsium vinaceum*)  
Mesa Verde cactus (*Sclerocactus mesae-verdae*)

## Special Status Species (Species of Concern, BLM Sensitive and State Listed):

The following is a list of those Federal Species of Concern, BLM Sensitive and State Listed species.

### Mammal

New Mexico meadow jumping mouse	Western red bat
Pecos River muskrat	Desert pocket gopher
Townsend's big-eared bat	Swift fox
Allen's big-eared bat	Cebolleta southern pocket gopher
Southwestern otter	Organ Mountains colorado chipmunk
	White Sands woodrat
	Guadalupe southern pocket gopher

**Mammal (Concluded)**

White-sided jackrabbit  
Spotted bat  
Arizona shrew  
Least shrew  
Western yellow bat  
Penasco least chipmunk  
Arizona montane vole  
American martin  
Desert bighorn sheep

**Birds**

American peregrine falcon  
Arctic peregrine falcon  
Bairds' sparrow  
Black tern  
Northern goshawk  
Western burrowing owl  
Bell's vireo  
Common black hawk  
Gould's turkey  
Whiskered screech owl  
Neotropical cormorant  
Whooping crane  
Common ground dove  
Brown pelican  
White-tailed ptarmigan  
Mountain plover  
Whiskered screech owl  
Boreal owl  
Buff-collared nightjar  
Broad-billed hummingbird  
White-eared hummingbird  
Violet-crowned hummingbird  
Lucifer hummingbird  
Costa's hummingbird  
Elegant trogon  
Gila woodpecker  
Northern beardless tyrannulet  
Thick-billed kingbird  
Gray vireo  
Albert's towhee  
Arizona grasshopper sparrow  
Yellow-eyed junco  
Varied bunting

**Fish**

Chihuahua catfish  
Desert sucker  
Roundtail chub  
Sonora sucker  
Greenthroat darter  
Headwater catfish  
Pecos pupfish  
Rio Grande shiner  
Rio Grande sucker  
Rio Grande cutthroat trout  
Blue sucker  
Gray redbhorse  
White Sands pupfish  
Arkansas River speckled chub  
Mexican tetra  
Canadian speckled chub  
Suckermouth minnow  
Southern redbelly dace  
Brook stickleback  
Bigscale logperch

**Amphibians**

Lowland leopard frog  
Sacramento mountain salamander  
Jemez mountain salamander  
Colorado river toad  
Great Plains narrowmouth toad  
Spotted chorus frog

**Reptiles**

Mexican garter snake  
Narrowhead garter snake  
Gray-checkered whiptail  
Western river cooter  
Bunch grass lizard  
Giant spotted whiptail  
Mountain skink  
Reticulate gila monster  
Blotched water snake  
Green rat snake  
Arid land ribbon snake  
Mottled rock rattlesnake

## **Molluscs/Crustaceans**

Dona Ana talussnail  
Ovate vertigo snail  
Pecos pyrg snail  
Shortneck snaggleteeth snail  
Hacheta grande woodlandsnail  
Cook's Peak woodlandsnail  
Florida mountainsnail  
Mineral Creek mountainsnail  
Sangre de Cristo pea-clam  
Paper-shell mussel  
Texas hornshell  
Swamp fingernailclam  
Lake fingernailclam  
Long fingernailclam  
Lilljeborg's pea-clam  
Wrinkled marshsnail  
Star gyro snail

## **Other Invertebrates**

New Mexico silverspot butterfly  
Mescalero sands tiger beetle  
Mescalero sands June beetle  
Desert viceroy butterfly  
Anthony blister beetle  
Limestone tiger beetle  
Millipede  
Grants tiger beetle  
Animas minute moss beetle  
Bonita diving beetle  
Sacramento mountain silverspot butterfly  
Sacramento mountain blue butterfly  
San Ysidro tiger beetle  
William Lar's tiger beetle  
San Juan tiger beetle  
Estancia tiger beetle  
Rumpp's tiger beetle  
Regal silverspot butterfly

## **Flowering Plants**

Gila groundsel  
Gooding's onion  
Hess's fleabane  
Mogollon clover  
Parish's alkali grass  
Santa Fe cholla  
Wright's marsh thistle

## **Flowering Plants (Concluded)**

Acoma fleabane  
Cinder phacelia  
Gypsum phacelia  
Dwarf milkweed  
Alamo beard tongue  
Desert night-blooming cereus  
Mescalero milkwort  
Nodding rock-daisy  
Organ Mountain evening primrose  
Organ Mountain figwort  
Sand prickly pear  
Sandhill goosefoot  
Standley whitlow-grass  
Few-flowing jewelflower  
Glass Mountain (shining) coral-root  
Guadalupe rabbitbrush  
Mat lestdaisy  
Tharp's blue-star  
Wright's water-willow  
Pinos Altos flame flower  
Porsild's starwort  
San Carlos wild-buckwheat  
Slender spiderflower  
Wright's dogweed  
Spellenberg's groundsel  
Arizona willow  
Ripley milk-vetch  
Duncan's pincushion cactus  
Bisti fleabane  
Brack's fishhook cactus  
Beautiful gilia  
Knight's milk-vetch  
Gypsum townsendia  
Sierra Blanca cliff daisy  
Villard's pincushion cactus  
Guadalupe rabbitbrush  
Gypsum scalebroom  
Sivinski's fleabane  
Scheer's pincushion cactus  
Organ Mountain pincushion cactus  
Golden lady's slipper  
Crested coral-root  
Gypsum scalebroom  
Wood lily  
Wilcox pincushion cactus  
Great Plains lady tresses

## C.2. CONSERVATION MEASURES

The following Conservation Measures will be implemented for all fire management activities (wildland fire use, prescribed fire, mechanical, chemical, and biological treatments). These Conservation Measures are intended to provide statewide consistency in reducing the effects of fire management actions on Federally threatened, endangered, proposed, and candidate ("Federally protected") species. If Conservation Measures for a species cannot be implemented, BLM would re-initiate Section 7 consultation process with the U.S. Fish and Wildlife Service (USFWS) for that particular activity.

BLM will update their local Fire Management Plans to include site-specific actions for managing fuels in accordance with the new Federal fire policies, based on guidance provided in the Decision Record for this Statewide RMP Amendment. These plans, along with subsequent project-level plans, will be coordinated with the USFWS and the New Mexico Department of Game and Fish to address site-specific concerns for Federally protected species. These plans will incorporate the Conservation Measures included in this Statewide Plan Amendment for Federally protected species occurring within each Fire Management Unit. Consultation with the FWS will occur with project-level plans, as necessary.

For fire suppression activities, firefighter and public safety is the first priority in every situation. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources must be based on the values to be protected, human health and safety, and costs of protection (2001 Federal Wildland Fire Management Policy). However, implementing the following Conservation Measures during fire suppression activities to the greatest extent possible would minimize or eliminate the effects to Federally protected species and habitats. Procedures within the Interagency Standards for Fire and Fire Aviation Operations 2003, including future updates, relevant to fire operations that may affect Federally protected species or their habitat are incorporated here by reference<sup>1</sup>.

During fire suppression actions, Resource Advisors will be designated to coordinate concerns regarding Federally protected species, and to serve as a liaison between the Field Office Manager and the Incident Commander/Incident Management Team. Resource Advisors (in coordination with the USFWS), Fire Management Officers or Incident Commanders, and other resource specialists would need to coordinate to determine which Conservation Measures would be implemented during a particular activity. The Resource Advisors will have the necessary information on Federally protected species and habitats in the area and the available Conservation Measures for the species. They will be briefed on the intended suppression actions for the fire, and will provide input on which Conservation Measures are appropriate, within the standard constraints of safety and operational procedures.

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<sup>1</sup> BLM, NPS, USFWS, USFS. 2003. *Interagency Standards for Fire and Fire Aviation Operations 2003*. Department of the Interior, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service; Department of Agriculture, U.S. Forest Service. These standards can be found at: <http://www.fire.blm.gov/Standards/redbook.htm> (Note: This document is updated annually. For BLM, this document is Handbook 9213-1).

## CONSERVATION MEASURES FOR FIRE SUPPRESSION ACTIVITIES

### Wildland Fire Suppression (FS)

The following Conservation Measures will be implemented during fire suppression operations, including adaptively managed fires, unless firefighter or public safety, or the protection of property, improvements, or natural or cultural resources, render them infeasible during a particular operation. Each Conservation Measure has been given an alphanumeric designation for organizational purposes (e.g., FS-1). Necessary modifications of the Conservation Measures or impacts to Federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor and coordinated with the USFWS.

- FS-1** Protect known locations of habitat occupied by Federally listed species. Best Management Practices and Minimum Impact Suppression Tactics (M.I.S.T.) will be followed in all areas with known Federally protected species or habitat.
- FS-2** Resource Advisors will be designated to coordinate natural resource concerns, including Federally protected species. They will also serve as a field contact representative (FCR) responsible for coordination with the USFWS. Duties will include identifying protective measures endorsed by the Field Office Manager and delivering these measures to the Incident Commander; surveying prospective campsites, aircraft landing and fueling sites; and performing other duties necessary to ensure that adverse effects to Federally protected species and their habitats are minimized. On-the-ground monitors will be designated and used when fire suppression activities occur within identified occupied or suitable habitat for Federally protected species.
- FS-3** All personnel on the fire (firefighters and support personnel) will be briefed and educated by Resource Advisors or designated supervisors about listed species and the importance of minimizing impacts to individuals and their habitats. All personnel will be informed of the conservation measures designed to minimize or eliminate take of the species present. This information is best identified in the incident objectives.
- FS-4** Permanent road construction will not be permitted during fire suppression activities in habitat occupied by Federally protected species. Construction of temporary roads is approved only if necessary for safety or the protection of property or resources, including Federally protected species habitat. Temporary road construction should be coordinated with the USFWS, through the Resource Advisor.
- FS-5** Crew camps, equipment staging areas, and aircraft landing and fueling areas should be located outside of listed species habitats, and preferably in locations that are disturbed. If camps must be located in listed species habitat, the Resource Advisor will be consulted to ensure habitat damage and other effects to listed species are minimized and documented. The Resource Advisor should also consider the potential for indirect effects to listed species or their habitat from the site location of camps and staging areas (e.g., if an area is within the water flow pattern, there may be indirect effects to aquatic habitat or species located off-site).

- FS-6** All fire management protocols to protect Federally protected species will be coordinated with local fire suppression agencies that conduct fire suppression on BLM-administered land to ensure that the agency knows how to minimize impacts to Federally protected species in the area.
- FS-7** The effectiveness of fire suppression activities and Conservation Measures for Federally protected species should be evaluated after a fire, when practical, and the results shared with the USFWS and New Mexico Department of Game & Fish (NMDGF). Revise future fire suppression plans and tactical applications as needed and as practical.

Wildland Fire Suppression (Including Wildland Fire Use) and Rehabilitation in Riparian and Aquatic Habitats (RA)

The following Conservation Measures will be implemented during fire suppression operations in riparian, wetland, or aquatic habitats, unless firefighter or public safety, or the protection of property, improvements, or natural or cultural resources, render them infeasible during a particular operation. Necessary modifications of the Conservation Measures or impacts to Federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the USFWS.

- RA-1** During wildland fire suppression, apply M.I.S.T. within riparian habitats occupied by Federally protected species or designated areas that drain into Federally protected fish habitat. Fire suppression actions in riparian habitats should be prioritized to minimize damage to stands of native vegetation from wildland fire or suppression operations. To the extent possible, retain large, downed woody materials and snags that are not a hazard to firefighters.
- RA-2** Fire suppression and rehabilitation in riparian corridors with Federally protected fish or wildlife species will be coordinated with the Resource Advisor or qualified biologist approved by BLM.
- RA-3** Site-specific Fire Management Plans that include project areas with Federally protected aquatic or riparian-obligate species will specify fire management objectives and wildland fire suppression guidance, taking into account the special concerns related to these species.
- RA-4** In riparian habitats occupied by Federally protected species, use natural barriers or openings in riparian vegetation as the easiest, safest method to manage a riparian wildland fire. Where possible and practical, use wet firebreaks or sandy overflow channels rather than constructing firelines by hand or with heavy equipment.
- RA-5** Crossings of perennial streams in suitable or occupied habitat for Federally protected species will not be permitted, unless an established road already exists or where dry, intermittent sections occur.
- RA-6** Avoid the use of fire retardants or chemical foams in riparian habitats or within 300 feet of aquatic habitats, particularly sites occupied by Federally protected species. Apply operational guidelines as stated in the *Interagency Standards for Fire and Fire Aviation Operations 2003 (or updates)*, "Environmental Guidelines for Delivery of Retardant or Foam Near Waterways," Chapter 8 (pp. 8-13 through 8-15).



- RA-7** Priority for placement of fire camps, fire staging areas, and aircraft landing or refueling sites will be outside riparian habitats or river/stream corridors occupied by Federally protected species.
- RA-8** When using water from sources supporting Federally protected species, care must be taken to ensure adverse impacts to these species are minimized or prevented. Consider replacing water when appropriate. Unused water from fire abatement activities will not be dumped in sites occupied by Federally protected aquatic species to avoid introducing non-native species, diseases, or parasites.
- RA-9** Use of containment systems for portable pumps to avoid fuel spills in riparian or aquatic systems will be required.
- RA-10 (Recommended)** Develop and implement restoration plans for affected riparian or aquatic habitats, including long-term monitoring, to document changes in conditions in the riparian zone and watershed that maintain flood regimes and reduce fire susceptibility. Monitor stream water quality and riparian ecosystem health to determine the effects of wildland fire and fire management activities. Coordinate efforts and results with the USFWS and NMDGF.

## CONSERVATION MEASURES FOR FIRE MANAGEMENT ACTIVITIES

### Fuels Treatments (Prescribed Fire, Mechanical, Chemical, and Biological Treatments) in Riparian and Aquatic Habitat (RA)

The following Conservation Measures **are mandatory** when implementing prescribed fires and the proposed vegetation treatments (mechanical, chemical, biological) within riparian, wetland, or aquatic habitats. If these Conservation Measures can not be followed as part of the Proposed Action, consultation with USFWS will be re-initiated if necessary.

- RA-11** All Conservation Measures for wildland fire suppression (**RA-1 to RA-10, Section 6.1.2**), also apply to fuels treatment activities (prescribed fire; mechanical, chemical, and biological treatments) in riparian, wetland, and aquatic habitats with suitable habitat for threatened, endangered, or protected (TEP) species.
- RA-12** No vegetative manipulation within ¼ mile of riparian/wetland areas with occupied or potential habitats of any TEP species will be allowed without further consultation with USFWS.
- RA-13** Fire management treatments outside ¼ mile of riparian and aquatic habitats will be designed to provide long-term benefits to aquatic and riparian resources with TEP species by reducing threats associated with dewatering and surface disturbance, or by improving the condition of the watershed and enhancing watershed function.
- RA-14** For priority fire/fuels management areas (e.g., WUIs) with Federally protected species or designated critical habitat downstream from these areas, BLM biologists and other resource specialists, as appropriate, in coordination with USFWS and NMDGF, will determine:
- A) The number of acres and the number of projects or phases of projects to occur within one watershed per year.

- B) An appropriately-sized buffer adjacent to perennial streams in order to minimize soil and ash from entering the stream.
- C) Where livestock grazing occurs in areas that have been burned, specialists will determine when grazing can be resumed. Such deferments from grazing will only occur when necessary to protect streams from increased ash or sediment flow into streams.

If agreement cannot be reached or treatment will not meet fuel reduction objectives, BLM will re-initiate consultation.

**RA-15** Water from sources supporting Federally protected species (e.g., fire engine use in support of prescribe burning) will not be taken to ensure no adverse impacts to these species. Unused water from fire activities will not be dumped in sites occupied by Federally protected aquatic species to avoid introducing non-native species, diseases, or parasites.

#### Fuels Treatments (Prescribed Burning and Other Fuels Management Treatments - FT)

The following Conservation Measures **are mandatory** when implementing prescribed fires and the proposed vegetation treatments (mechanical, chemical, biological):

- FT-1** Biologists will be involved in the development of prescribed burn plans and vegetation treatment plans to minimize effects to Federally protected species and their habitats within, adjacent to, and downstream from proposed project sites. Biologists will consider the seasonal and spatial needs of Federally protected species (e.g., avoiding or protecting important use areas or structures and maintaining adequate patches of key habitat components) during project planning and implementation.
- FT-2** Best Management Practices and M.I.S.T. will be followed in all areas with known Federally protected species or habitats.
- FT-3** Pre-project surveys and clearances (biological evaluations/assessments) for Federally protected species will be required for each project site before implementation. All applicable Conservation Measures will be applied to areas with unsurveyed suitable habitat for Federally protected species, until a survey has been conducted by qualified personnel to clear the area for the treatment activity.
- FT-4** Use of motorized vehicles during prescribed burns or other fuels treatment activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, washes, and temporary fuel breaks or site-access routes. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after the prescribed burn or fuels treatment project is completed.
- FT-5** As part of the mandatory fire briefing held prior to prescribed burning, all personnel (firefighters and support personnel) will be briefed and educated by Resource Advisors or designated supervisors about listed species and the importance of minimizing impacts to individuals and their habitats. All personnel will be informed of the Conservation Measures designed to minimize or eliminate take of the species present.

## Rehabilitation and Restoration (RR)

- RR-1** When rehabilitating important areas for Federally listed species that have been damaged by fire or other fuels treatments, the biologist will give careful consideration to minimizing long-term impacts. Someone who is familiar with fire impacts and the needs of the affected species will contribute to rehabilitation plan development. Appropriate timing of rehabilitation and spatial needs of Federally listed species will be addressed in rehabilitation plans.
- RR-2** Seed from regionally native or sterile alien (non-native) species of grasses and herbaceous vegetation will be used in areas where reseeding is necessary following ground disturbance to stabilize soils and prevent erosion by both wind and water.
- RR-3** Sediment traps or other erosion control methods will be used to reduce or eliminate influx of ash and sediment into aquatic systems.
- RR-4** Use of motorized vehicles during rehabilitation or restoration activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, or washes, and to temporary access roads or fuel breaks created to enable the fire suppression, prescribed burn, or fuels treatment activities to occur. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after rehabilitation or restoration activities are completed.
- RR-5** All temporary roads, vehicle tracks, skid trails, and off-road vehicle (ORV) trails resulting from fire suppression and the proposed fire management activities will be rehabilitated (using water bars, etc.), and will be closed or made impassible for future use.
- RR-6** Burned area emergency rehabilitation (BAER) activities and long-term restoration activities should be monitored, and the results provided to the USFWS and NMDGF. Section 7 consultation for BAER activities will be conducted independently, if necessary.
- RR-7 (Recommended)** Develop public education plans that discourage or restrict fires and fire-prone recreation uses during high fire-risk periods. Develop brochures, signs, and other interpretive materials to educate recreationists about the ecological role of fires, and the potential dangers of accidental fires.

## SPECIES SPECIFIC CONSERVATION MEASURES

In addition to the general Conservation Measures listed in Sections 1.0 and 2.0, the following species-specific Conservation Measures will be applied during wildland fire suppression to the greatest extent possible, and will be required during fuels treatment activities (wildland fire use, prescribed fire, vegetation treatments). Necessary modifications of the Conservation Measures or impacts to Federally protected species and habitat during fire suppression operations will be documented by the Resource Advisor, and coordinated with the USFWS.

### Reptiles and Amphibians

#### **Chiricahua Leopard Frog (Federal Threatened)**

- CF-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

- CF-2** No implementation of management activities will occur within occupied habitat for the Chiricahua leopard frog without further consultation with U.S Fish and Wildlife Service.
- CF-3** Install sediment traps, as determined by a Resource Advisor or qualified biologist approved by the BLM, upstream of tanks and ponds occupied by Chiricahua leopard frogs in order to minimize the amount of ash and sediment entering the water. Consultation with a qualified biologist during the planning phase will aid in determining sediment trap installation requirements (see Conservation Measures FT-1 and FT-3).
- CF-4** All personnel performing management activities at any creek crossing will be informed of the potential presence of Chiricahua leopard frogs, their status, and the need to perform their duties to avoid impacts to the frog and its habitat.

#### **New Mexico Ridgenose Rattlesnake (Federal Threatened)**

- RN-1** To the extent possible, minimize surface disturbing activities from fire suppression and fuels treatment activities within New Mexico ridgenose rattlesnake habitat on BLM-administered land in the Peloncillo and Animas Mountains, particularly during active periods for snakes (July through October).
- RN-2** Prior to using wildland fire for resource benefit, cool season (November – March) prescribed fire or other fuel treatments should be used to reduce unnatural fuel loads within suitable habitat to avoid catastrophic fires and loss of canopy cover.

#### **Sand Dune Lizard (Federal Candidate)**

- DL-1** No management activities (wildland fire use; prescribed fire; mechanical, chemical, or biological treatments) of shinnery oak will be implemented within known occupied habitat of the Sand Dune lizard. For management activities within potential habitat for the Sand Dune lizard, unsurveyed areas will be considered occupied unless surveyed prior to project implementation.
- DL-2** Suppress all wildfires in sand dune lizard habitat with minimum surface disturbance so as not to impact the integrity of the sand dunes.
- DL-3** No campsites, aircraft landing or fueling sites, or equipment staging areas will be located within known or unsurveyed potential sand dune lizard habitat.
- DL-4** As soon as practical, all personnel involved in wildland fire suppression (firefighters and support personnel) will be briefed and educated about sand dune lizards and the importance of protecting habitat and minimizing take, particularly due to vehicle use.
- DL-5** Fire crews or rehabilitation crews will, to the extent possible, obliterate off-road vehicle tracks made during fire suppression in sand dune lizard habitat, especially those of tracked vehicles, to reduce future use.

#### **Boreal Western Toad (Federal Candidate)**

- BT-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.

- BT-2** No management activities will be implemented within known occupied habitat of the Boreal western toad. For management activities within potential habitat for the Boreal western toad, unsurveyed areas will be considered occupied unless surveyed prior to project implementation.
- BT-3** Install sediment traps, as determined by a Resource Advisor or qualified biologist approved by BLM, upstream of streams, ponds, lakes, or any wetlands of potential habitat of the Boreal western toad in order to minimize the amount of ash and sediment entering the water. Consultation with a qualified biologist during the planning phase will aid in determining sediment trap installation requirements (see Conservation Measures FT-1 and FT-3).
- BT-4** All personnel performing management activities at any creek crossing will be informed of the potential habitat of Boreal western toads, their status, and the need to perform their duties to avoid impacts to the habitat.
- BT-5** All personnel performing fire management activities at any creek crossing with potential habitat of Boreal western toad will minimize the impacts to the habitat by keeping the vehicular traffic, pedestrian traffic, and any other disturbing activities to a minimum to avoid habitat degradation.

#### Birds

##### **Bald Eagle (Federal Threatened)**

- BE-1** No human activity will be allowed within ½ mile of known bald eagle nest sites between December 1 and June 30.
- BE-2** No tree cutting will be allowed within ¼ mile of known nest trees.
- BE-3** No human activity will be allowed within ¼ mile of known bald eagle winter roost areas between October 15 and April 15.
- BE-4** No tree cutting will be allowed within the area immediately around winter roost sites as determined by BLM biologists.
- BE-5** No helicopter or aircraft activity or aerial retardant application will be allowed within ½ mile of bald eagle nest sites between December 1 and June 30 or winter roost sites between October 15 and April 15.
- BE-6** Conduct prescribed burn activities outside of nesting season in a manner to ensure nest and winter roost sites are more than ½ mile from downwind smoke effects.
- BE-7** Provide reasonable protective measures so fire prescription or fuels treatment will not consume dominant, large trees as identified by the Resource Advisor or qualified biologist approved by the BLM within ½ mile of known nests and roosts of bald eagles. Pre-treatment efforts should provide reasonable protection of identified nesting and roosting trees (see Conservation Measure FT-4).

**Interior Least Tern (Endangered), Piping Plover (Threatened), Yellow-billed Cuckoo (Federal Candidate)**

- IT-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.
- IT-2** Prescribed fires, vegetative and herbicide treatment projects in occupied or suitable riparian/marsh habitat will only occur between September 1 and March 15 to avoid the breeding season.
- IT-3** Drift-inhibiting agents will be used to assure that the herbicide does not enter river areas.

**Northern Aplomado Falcon (Federal Endangered), Lesser Prairie Chicken (Federal Candidate)**

- AF-1** All conservation measures for Fuels Treatments and Fire Suppression, and Rehabilitation treatments (6.1.1, 6.1.2, and 6.1.3) will be implemented in occupied and potential aplomado falcon/lesser prairie chicken habitats.
- AF-2** BLM will implement temporary closures to human access and project implementation (prescribed burning, vegetation treatments) within ½ mile of nest sites for aplomado falcons and lek sites for lesser prairie chickens during the breeding season. Prescribed burning will be conducted in a manner to ensure that nest and lek sites are more than ½ mile from downwind smoke effects.

**Southwestern Willow Flycatcher (Federal Endangered)**

- WF-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.
- WF-2** Except where fires are active in occupied habitat, minimize unnecessary low-level helicopter flights during the breeding season (April 1 – September 30). Approach bucket dip sites at a 90-degree direction to rivers to minimize flight time over the river corridor and occupied riparian habitats. Locate landing sites for helicopters at least ¼ mile from occupied sites to avoid impacts to willow flycatchers and their habitat.
- WF-3** Minimize use of chainsaws or bulldozers to construct firelines through occupied or suitable habitat except where necessary to reduce the overall acreage of occupied habitat or other important habitat areas that would otherwise be burned.
- WF-4** Implementation activities (prescribed burning or vegetation treatments) will not occur within or adjacent to occupied or unsurveyed suitable habitat without further consultation with USFWS.
- WF-5** Avoid developing access roads that would result in fragmentation or a reduction in habitat quality. Close and rehabilitate all roads that were necessary for project implementation (see **RR-5**).
- WF-6** Prescribed burning will only be allowed within ½ mile of occupied or unsurveyed suitable habitat when weather conditions allow smoke to disperse away from the habitat when birds may be present (breeding season of April 1 – September 30).

## **Mexican Spotted Owl (Federal Threatened/Critical Habitat)**

- SO-1** No fuels management activities will occur within Mexican Spotted Owl (MSO) critical habitat designated on BLM-administered lands or occupied suitable habitat without further consultation with the USFWS.
- SO-2** BLM wildlife biologists will be involved early in the decision-making process for fuels management treatments (wildland fire use, prescribed fires, and vegetation treatments) that are planned within suitable habitat for MSO.
- SO-3** Suitable habitat for MSO will be surveyed prior to implementing prescribed fire or vegetation treatment activities on BLM-administered land to determine MSO presence and breeding status. These management activities will only be implemented within suitable habitat if birds are not present. If a spotted owl is discovered during these surveys, BLM will notify the USFWS to reinstitute consultation and will determine any additional Conservation Measures necessary to minimize or eliminate impacts to the owl.
- SO-4** The following measures will be followed in suitable habitat (unoccupied) whenever consistent with objectives to reduce hazardous fuels:
- A) Manage mixed-conifer and pine-oak forest types to provide continuous replacement nest habitat over space and time (Table III.B.1 of the Recovery Plan for Mexican Spotted Owl).
  - B) Incorporate natural variation, such as irregular tree spacing and various stand/patch sizes, into management prescriptions and attempt to mimic natural disturbance patterns.
  - C) Maintain all species of native vegetation in the landscape, including early seral species. To allow for variation in existing stand structures and provide species diversity, both uneven-aged and even-aged systems may be used as appropriate.
  - D) Allow natural canopy gap processes to occur, thus producing horizontal variation in stand structure.
  - E) Within pine-oak types, fuels treatment activities should emphasize retaining existing large oaks and promoting the growth of additional large oaks.
  - F) Retain all trees >24 inches diameter at breast height (dbh).
  - G) Retain hardwoods, large down logs, large trees, and snags. Emphasize a mix of size and age classes of trees. The mix should include large mature trees, vertical diversity, and other structural and floristic characteristics that typify natural forest conditions.
- SO-5** The following measures will be followed in suitable habitat (unoccupied) with steep slopes outside of Protected Activity Centers (PAC), whenever consistent with objectives to reduce hazardous fuels:

- A) Within mixed-conifer and pine-oak types, allow no harvest of trees >18 inches dbh on any slopes >40 percent where timber harvest has not occurred in the past 20 years. These guidelines also apply to the bottoms of steep canyons. Thinning of trees <18 inches dbh, treatment of fuels, and fire are allowed. No seasonal restrictions apply if the sites are unoccupied by spotted owls. Prescribed natural fire and the creation of firebreaks may be used as appropriate.
  - B) On steep slopes treated to reduce fire risk, either by the use of prescribed fire alone or in conjunction with removal of stems and ground fuels, pre- and post-treatment monitoring of habitat conditions should be completed. Specific habitat characteristics to be measured include fuel levels, snag basal area, volume of large logs (>18 inches dbh) remaining, and live tree basal area. No burning will be allowed in occupied or suitable habitat; USFWS would require a Take Statement if burning were to occur. Fuels treatments on steep slopes will be avoided when possible (see Conservation Measure FT-4).
- SO-6** If a MSO is discovered during fire suppression or fuels treatment activities (wildland fire use, prescribed fire, vegetation treatments), the Resource Advisor or a qualified wildlife biologist will document the find and assess potential harm to the owl and advise the Incident Commander or project crew boss of methods to prevent harm. The information will include for each owl the location, date, and time of observation and the general condition of the owl. The Resource Advisor or biologist will contact the appropriate USFWS office, and BLM will reinitiate consultation for the fire suppression or project activities.
- SO-7** The effects of fire suppression and fuels treatment activities on MSO and their habitat, and the effectiveness of these Conservation Measures, will be assessed after each fire event or fuels treatment project by the Resource Advisor or local biologist to allow evaluation of these guidelines and to allow the USFWS to track the species environmental baseline. Prescriptions for wildland fire use, prescribed fires, and vegetation treatments will be adjusted, if necessary.

## Fish

**Rio Grande Silvery Minnow (Federal Endangered), Gila Trout (Federal Endangered), Loach Minnow (Federal Threatened/Critical Habitat); Spikedace (Federal Threatened/Critical Habitat), Gila Chub (Proposed Endangered/Critical Habitat), Pecos Gambusia (Federal Endangered), Pecos Bluntnose Shiner (Federal Threatened/Critical Habitat), Arkansas River Shiner (Federal Threatened), Gila Topminnow (Federal Endangered), Beautiful Shiner (Federal Threatened), Chihuahua Chub (Federal Threatened), Colorado Pikeminnow (Federal Endangered/ Critical Habitat), Razorback Sucker (Federal Endangered/Critical Habitat), Zuni Bluehead Sucker (Federal Candidate)**

- FI-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats.
- FI-2** No permanent or temporary road construction would be allowed within the boundaries of WUI areas.



- FI-3** No equipment use will be allowed in perennial channels or intermittent channels with water, except at crossings that already exist. Vehicle and heavy equipment use in drainage bottoms, including in both riparian and non-riparian areas, that drain into T&E Fish habitat will be coordinated with the District Biologist and/or a fisheries biologist.
- FI-4** Thinning and any other type of mechanical treatment of vegetation in drainage bottoms will be coordinated with the District Biologist and/or a fisheries biologist. Best Management Practices (BMPs) will be followed in all treatment areas.
- FI-5** No pile or jackpot burning in ephemeral, intermittent, or perennial channels will be allowed. Pile and jackpot burning adjacent to channels (ephemeral, intermittent, or perennial) that flow into T&E Fish habitat will be coordinated with the District Biologist and/or a fisheries biologist so that adequate buffers are identified.
- FI-6** The District Biologist and/or a fisheries biologist will be involved in the development of prescribed burn plans to minimize ash input into T&E Fish habitat. Consider the following activities in the effort to minimize ash input: Prescribe burn WUI areas in multiple year phases; prescribe burn WUI areas early enough (fall or early spring burning) to allow vegetation growth prior to summer rains; protect key riparian areas; minimize fire in riparian areas; etc.
- FI-7** Fire line and skid trail construction in drainages that flow into T&E Fish habitat will be coordinated with the District Biologist and/or a fisheries biologist.
- FI-8** To minimize the cumulative affect of livestock grazing in areas that have been burned, livestock will not be allowed in the treated area of the watershed that flows into T&E Fish habitat until the area has recovered enough to control ash and sediment produced by the treatment. This time period will be coordinated with the Range Specialist, Hydrologist and Biologist.
- FI-9** No machinery used for vegetation removal or firebreak preparation will be allowed within 10 feet of standing or flowing water in the river channel. Vegetation removal needed for the construction of firebreaks within 10 feet of standing or flowing water will be removed using hand tools. Any material removed during the construction of firebreaks will be pushed away from the river channel and never into the channel itself.

#### Flowering Plants

The following Conservation Measures for known locations and unsurveyed habitat within the planning area of all Federally protected plant species listed below will be implemented during prescribed fire and vegetation treatment activities:

**Zuni Fleabane (Federal Threatened), Kuenzler Hedgehog Cactus (Federal Endangered), Pecos sunflower (Federal Threatened), Sneed Pincushion Cactus (Federal Endangered), Gypsum Wild-buckwheat (Federal Threatened/Critical Habitat), Lee Pincushion Cactus (Federal Threatened), Sacramento Prickly Poppy (Federal Endangered), Todsen's Pennyroyal (Federal Endangered/Critical Habitat), Knowlton's Cactus (Federal Endangered), Mancos Milk-vetch (Federal Endangered), Mesa Verde Cactus (Federal Threatened)**

- PL-1** No staging of equipment or personnel will be permitted within 100 meters of identified individuals or populations of Federally protected and sensitive plant populations, nor will off-road vehicles be allowed within the 100-meter buffer area, unless necessary for firefighter or public safety or the protection of property, improvements, or other resources (see **FS-7**). One of the primary threats to many of these plant species is trampling or crushing from personnel and vehicles.
- PL-2** No prescribed burning will be implemented within 100 meters of identified locations or unsurveyed suitable habitat for Federally protected and sensitive plant populations unless specifically designed to maintain or improve the existing population.
- PL-3** Utilize minimum impact tactics to minimize disturbance of vegetation and soils.
- PL-4** Utilize a Resource Advisor for all management activities within and adjacent to Federally protected and sensitive plant population habitats.
- PL-5** Implement Conservation Measures for Fire Suppression Activities (6.1.1) and Conservation Measures for Fire Activities in Riparian and Aquatic Habitats.

There are no species-specific conservation measures for the following Federally protected plant species, because they do not occur within BLM administered lands: **Sacramento Mountains thistle** and **Holy Ghost impomopsis**.

#### Mammals

#### **Black-footed Ferret (Federal Endangered), Black-tailed Prairie Dog (Federal Candidate)**

- BF-1** No heavy equipment operation off of existing roads will be allowed within ¼ mile of Black-tailed prairie dog towns, or Gunnison prairie dog towns with known occurrence of Black-footed ferrets.
- BF-2** No aerial retardant application will be allowed within ¼ mile of Black-tailed prairie dog towns or Gunnison prairie dog towns with known occurrence of Black-footed ferrets.
- BF-3** No surface disturbance of Black-tailed prairie dog towns or Gunnison prairie dog towns with known occurrence of Black-footed ferrets will be allowed.

#### **Jaguar (Federal Endangered)**

- JA-1** Implement the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats to minimize adverse effects to jaguars that may occur in dense riparian habitats on BLM-administered land.
- JA-2** Maintain dense, low vegetation in major riparian or xero-riparian corridors on BLM-administered land in identified locations south of Interstate 10 in the Bootheel region of New Mexico. Locations will be identified in site-specific fire management plans.

### **Lesser Long-nosed and Mexican Long-nosed Bats (Federal Endangered)**

- LB-1** Instruct all crew bosses (managed wildland fire, prescribed fire, and vegetation treatments) in the identification of agave cacti and the importance of their protection.
- LB-2** Prior to implementing any fuels treatment activities (prescribed fire, vegetation treatments), pre-project surveys will be conducted for paniculate agaves that may be directly affected by fuels management activities.
- LB-3** Protect long-nosed bat forage plants--high concentrations of agaves--from modification by fuels treatment activities (prescribed fire, vegetation treatments) to the greatest extent possible. "Agave concentrations" are contiguous stands or concentrations of more than 20 plants per acre. Avoid driving over plants, piling slash on top of plants, and burning on or near plants. No staging of fire management crews or equipment will be allowed within concentration areas of agave.
- LB-4** No seeding/planting of nonnative plants will occur in any wildland fire rehabilitation site or fuels treatment site with paniculate agaves or saguaros.
- LB-5** BLM personnel should examine concentrations of agaves (including shindagger – *A. schottii*) within each proposed fuels treatment area, and blackline or otherwise protect from treatments any significant concentrations of agaves that appear to be amidst fuel loads that could result in mortality greater than 20 percent (>50 percent for *A. schottii*). BLM personnel should use their best judgment, based on biological and fire expertise, to determine which significant agave stands are prone to mortality greater than 20 percent (>50 percent for *A. schottii*) (see Conservation Measures FT-1 and FT-3).

### **Mexican Gray Wolf (Federal Endangered; 10(j) species), Canada Lynx (Federal Threatened)**

If Mexican gray wolves or Canada lynx are re-established on public lands, then the following Conservation Measures will apply:

- GW-1** Implement Conservation Measures for Fire Suppression Activities and Fire Management Activities.
- GW-2** No human disturbance associated with management activities will be allowed within one mile of a Mexican gray wolf den or rendezvous site from April 1 to June 30.

### Invertebrates

Implementation of the Conservation Measures for Fire Management Activities in Riparian and Aquatic Habitats is the only Conservation Measure for all invertebrate species. None of the invertebrate species occur within BLM administered lands. Any measures implemented to enhance riparian and aquatic habitats would benefit the invertebrates' habitat.

There are no species-specific conservation measures for the following Federally protected species: **Koster's springsnail, Pecos assimineia snail, Roswell pyrg, Noel's amphipod, Sacramento Mountain checkerspot butterfly, Alamosa springsnail, Socorro isopod, Socorro pyrg, Gila pyrg, Texas hornshell, New Mexico hotspring pyrg, and Chupadera pyrg.**

